UNIVERSITI TEKNOLOGI MARA

THE DEVELOPMENT OF FRAMEWORK IN SOFTWARE IMPLEMENTATION TO ENHANCE CONTRACTOR'S CONSTRUCTION COST ESTIMATE

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of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in the thesis was carried out in accordance with the regulations of University Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic or non-academic institution for any degree or qualification.

I, hereby, acknowledged that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

It has been argue that the adoption of Construction Cost Estimate (CCE) software has failed to make positive impact towards construction cost estimating performance. It is also has been argued that the software are under-utilized due to its inefficiency in terms of difficulty, cost and does not match with the company's style of cost estimating and measurement works. It was also found that improper attention to the human aspects of implementing technology has been identified as a primary cause of technology implementation failure. Therefore, this research is objectively designated to explore the current usage of CCE software features and user's diffusion factors towards cost estimating and measurement performance in order to achieve the aim which is to establish a framework to further improve the CCE software implementation by contractors in Malaysia. Both qualitative and quantitative methods of obtaining data were used in this research. A preliminary questionnaire survey was conducted initially, followed by semi-structured interview to focus the exploration into problems issues. The final postal questionnaire was distributed to 82 contractors who are consists of CCE software users, there were only 63 replied the questionnaire and from that, only 58 are completely answer and valid. Meanwhile, 20 existing respondents were selected to be participated during the interview. The study found that sub contractors and supplier were refused to respond the online quotation, the cost estimating check is inaccurate enough to verify the prices according to the project location and missing item during measurement, the automated generated summary cost estimating report was less flexible to meet the contractor's desire, difficult to get softcopy bill of quantities and drawings, no special department existed so far to manage the library and databases, and limited elemental of list available. Furthermore, it was also found that the employers did not adapt norm of cooperation in doing sharing knowledge, did not offer future benefits to those who strongly share their experts and knowledge to others, did not provide intangible rewards, and did not provide appropriate training and there is no clear benefit of CCE software implementation. Therefore, in order to improve the CCE software implementation towards better performance, identified problems of CCE software features and CCE software diffusion factors must be fixed by relevant parties.

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